

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-14 (Cancelled)

15. (Currently Amended) A data collection and diagnostic system, comprising:

a processing tool having a plurality of front end components, each one of said plurality of front end components electrically coupled with a component controller and generating messages and alarm signals relating to the operation of said front end component, wherein one component controller includes a sensor for detecting a spacing between a front surface of a port door enabling access into the processing tool and a front surface of a pod door as a pod advances towards the port door;

a tool controller electrically coupled to each one of said component controllers;

a data acquisition device electrically coupled to each one of said component controllers separate from said tool controller, said data acquisition device adapted to receive said messages and alarm signals generated by each one of said component controllers, including:

a processor;

a memory for storing said messages and alarm signals; and

a network interface; and

a remote computer electrically coupled to said tool controller and said network interface of said data acquisition device.

16. (original) The system according to claim 15, wherein said plurality of front end components are selected from a group consisting of (i) a load port assembly, (ii) a wafer handling robot, (iii) a pre-aligner, and (iv) an auto ID system.

17. (original) The system according to claim 15, wherein said component controllers are selected from a group consisting of (i) a load port assembly controller, (ii) an auto ID controller, (iii) a wafer handling robot controller, (iv) a pre-aligner controller, (v) a minienvironment controller, and (vi) an AMHS controller.

18. (previously presented) The system according to claim 15, wherein said remote computer is electrically coupled to said network interface through a local area network.

19. (previously presented) The system according to claim 15, wherein said remote computer is electrically coupled to said network interface through a wireless.

20. (Currently Amended) A data collection and diagnostic system, comprising:

a processing tool having a plurality of front end components, each one of said plurality of front end components having a component controller for generating messages and alarm signals relating to the operation of said front end component, wherein one component controller includes a sensor for detecting a spacing between a front surface of a port door enabling access into the processing tool and a front surface of a pod door as a pod advances towards the port door;

a tool controller electrically coupled to each one of said component controllers;

a data acquisition device electrically coupled to each one of said component controllers;
separate from said tool controller for monitoring said messages and alarm signals
generated by said component controllers:
a database for storing said messages and alarm signals generated by said component
controllers; and
a central computer electrically coupled to said tool controller, said data acquisition device
and said database.